EVALUATION OF THE ANTICOAGULANT ACTIVITY OF SPECIES OF CAATINGA PLANTS

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Introduction: Functional balance mechanisms of the hemostasis are intended to regulate the blood flow, preventing the excessive coagulation activation that can lead to vascular occlusion and thrombosis. The continuous use of anticoagulant drugs can cause deleterious effects to patients, such as hemorrhages, which have increased the interest about new therapeutic options mainly from natural sources. The Caatinga has a large variety of plant species, many of them endemic and adapted to environmental stress conditions. Recent studies indicate some of those species as promising sources of compounds with diverse biological activities such as antimicrobial, antioxidant, anticoagulant, and others. Objectives: The study evaluated in vitro the anticoagulant capability and the total content of phenolic compounds of Anadenanthera colubrina, Bowdichia virgilioides, Buchenavia tetraphylla, Libidibia ferrea, Myroxylon peruiferum, and Pityrocarpa moniliformis collected from Parque Nacional do Catimbau in Pernambuco, Brazil.

Materials and Methods: From the leaves were obtained organic extracts using the solvents: dichloromethane, tetrahydrofuran and acetone. The total content of fenolic compounds was evaluated by the Folin-Ciocalteu method. The Prothrombin Time (PT) and Partial Thromboplastin Activation Time (APTT) of the human plasma were monitored to evaluate the extracts’ anticoagulant potential.

Results: The results showed the PT wasn’t significant changed by any of the extracts. However, the APTT test was extended in 2 e 3 times to the acetonic extracts of B. tetraphylla and P. moniliformis. The extracts obtained from THF extended the APTT in 3 e 2 times, respectively. In comparison, dichloromethane extracts did not show any activity in the APTT. The best total phenolic compound contents were found in the THF extracts, being 146,98 mgEAC/g in B. tetraphylla and 153,34 mgEAC/g in P. moniliformis. Conclusion: The results indicate that the P. moniliformis and B. tetraphylla extracts can be useful for future studies on inhibition models of coagulation factors and thrombosis.

Keywords: Prothrombin Time; Activated Partial Thromboplastin Time; Organics extracts.

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